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ORIGINAL ARTICLES.

THE HORSE'S FOOT.

By A. ZUNDEL.

(Continued from page 445.)

CALK.

Synonym.—Kronentritt (German)—Atteinte (French).—Thus is called a contusion, with or without wound, that the animal receives on the coronet, from the shoe of another foot, or from a foreign body, or by another animal walking behind or alongside him.

The skin of that region is very thick, slightly extensible, not easily yielding to the inflammatory swelling; there is commonly sloughing and mortification of tissues, accompanied with violent pain. It is frequent in animals that forge, also in very young horses or those which are weak in the lumbar region, and which interfere and cut themselves in walking. This lesion is also very common in the districts where horses are shod with high calked shoes, when the wound resulting from it is made by the internal branch of the shoe, which lacerates the skin of the coronet. Horses shod to travel on ice are commonly affected with it; the injury being more or less serious according to the size and sharp condition of the calk.

Horses ridden in riding schools are often affected with it during the various evolutions of the *haute-ecole*.

It is called *single* when the wound is slight; *concealed* when the pain is great and continued, as in the case where it takes place on the tendon, near the heels or the quarters; *horny*, when the contusion has taken place on the wall or at the coronary band; *complicated*, when it is very serious and accompanied with other more severe lesions. It is always a horizontal wound or a tumor by contusion.

I. *Symptoms*.—It is ordinarily recognized by the wound or swelling which exists upon the parts. Often, the horse is lame, and the affected part warm and painful; sometimes the hairs are cut, the skin scratched or torn. There may be a slight bleeding at the seat of the wound. When the wall has received the contusion, the vascular network underneath may become inflamed, and then pus is formed between the teguments and the hoof, which then become separated. Sometimes even the lateral fibrocartilage of the foot becomes irritated and swollen and ulcerates, especially when the contusion has taken place on that part where the cartilage is; in this case the injury may be complicated with cartilaginous quittor.

In severe cases, one may recognize a *furuncular* calk, characterized by the mortification and sloughing of a portion of skin at the place where the contusion took place; it is the cutaneous quittor of old hippiatry, with formation of a core; this is always very painful, and the inflammation generally spreads underneath the wall. Bouley calls it *gangrenous* when there is unlimited similar mortification of the tissues; in this case the slough involves large portions of the skin. At times it may be called *phlegmonous*, when an abscess forms itself under the skin; then the coronet is warm, thick and inflamed, and the pain is extreme. Then if an incision be made through the dermis in its entire thickness, an abundant bleeding takes place, generally followed by the resolution of the disease; if there is already suppuration, it is at the same time immediately allowed to escape.

II. *Treatment*.—If the injury is slight or recent, whether with or without wound, very cold water and the removal of the cause

by taking off the shoe, are sufficient to bring on a cure. But if the contusion has been great and deep, recovery is more difficult to obtain on account of the suppuration which will follow. Then the application of poultices is indicated; if there is formation of a core and mortification of tissues, poultices of honey are especially indicated; in case of phlegmon, the poultice must be warm, and then incisions and counter openings must be made for the escape of pus; afterwards dressings are made with oakum saturated with tepid wine or tincture of aloes.

When the calking is horny, the use of emollient topically is insufficient; an excellent way then is to obtain the required sloughing of the tissues by actual cauterization—the iron heated to white heat; by thus destroying a portion of the hoof and the soft tissues, one will avoid the excessive pressure at the coronary band; this may also be prevented by the thinning down of the wall with the sage knife; but one must be careful not to remove too soon the portions of horn which may be detached.

When the calking takes place at the heel, it is good—so as to prevent other complications—to pare the foot down, especially at the heel, to remove the divided hoof and transform the wound to a simple one which can be dressed, as already stated, or with digestive ointment secured by several turns of a roller.

When there are wounds of the teguments, it sometimes happens, if the immediate union has not been obtained, that the portion of skin forming the inferior edge of the wound turns down and that the granulations protrude, tending to form a kind of fungoid growth. Chabert says that these must be cut off and dressed with oakum soaked in alcohol.

Calking at the hind feet being the most severe, and those which are followed by most serious complications, on account of the urine and droppings of the animal, which impregnate the wound, one can never be too particular in keeping them clean and dressing them well. When they end in cartilaginous quittor, they must be treated as that disease usually is.

As to the means of prevention, they consist in not placing the horses too close to each other in stables, fairs, &c., in not forcing them too much in their gait, in shoeing properly those which

forge or interfere, and in placing or riding them in such a way as to avoid the possibility of their wounding each other.

PUNCTURED WOUND OF THE FOOT.

Synonym.—Naglebritt (German)—Nail in the foot (English)—Clou de rue (French).—In veterinary science this designation has been given to a punctured wound, often with laceration, sometimes with contusions, either at the sole or frog of the foot of the monodactyles, and produced by sharp or cutting bodies, most commonly nails, upon which the animal steps. The form of these bodies, the direction they take, the force with which they penetrate, and the part of the sole they enter, give rise to various lesions, of varying gravity as they are older or as the injured part enjoys a greater sensibility.

Etiology.—Nails, stumps of nails, are most often those which are picked up in the streets; at other times it is a metallic substance elongated and sharpened; again, there are pieces of glass, or other substances, such as bones or sharp stones, which are picked up and produce the wound.

It is principally in the streets of populous cities, in the yards of builders, or on the grounds where buildings are pulled down, that horses are mostly exposed to receive these injuries. In rural districts they are rare, comparatively, to what they are in cities.

It is evident that horses with wide, flat, thin, softened hoofs are more exposed than those which are of different structure.

I. *Divisions.*—Punctured wounds of the foot may be *simple* or *superficial*, *deep* or *penetrating*.

One of these bodies, piercing into the frog, requires to go in deep to be serious, as above the frog (which is itself quite thick, though formed by a soft and flexible horn) is the plantar cushion, a fibrous, soft and elastic mass, which offers a great resistance. If, however, the injuring body is a very long nail, which runs perpendicularly in through the frog at the plantar cushion, it may reach the terminal extremity of the perforans tendon, situated immediately under the plantar cushion, and penetrate the sesamoid sheath. It is known that this sheath forms a sac of some dimensions, that it extends above and below from the infe-

rior half of the coronary to the semi-lunar crest, and in its transverse axis extends from one retrosal process to the other; the inferior portion of this synovial bursa covers the plantar aponeurosis in its whole extent. Sometimes, again, the puncturing body penetrates as far as the bone; sometimes the navicular; at others the os pedis, and sometimes even penetrates into the articulation.

II. *Symptoms.*—They vary according to the seat of the lesion, its depth, the mode of action of the penetrating body, length of time it has remained in the wound, and the nature of the lesions it has made; all conditions which may change the characters of the disease from a first degree, when the animal shows no evidence of pain, to the extreme point where its life is in danger, and even ends in death, by the excessive local alterations and the sufferings accompanying it.

Often the first point which assists in the diagnosis of the case is the *history*. The driver who has seen the horse become suddenly lame, has examined the foot and found a nail more or less deeply; at others, it is the surgeon who yet finds the nail in its hiding place. The exploration of the part shows with certainty the nature of the lesion, the direction and depth of the wound, as well as the physical condition of the body which has made it, and all circumstances which allow a positive diagnosis to be made.

Quite often the nail is no longer in the foot; sometimes it has left its mark—an opening which can be explored; often this is not visible at first sight, though the wound may be even deep; this is when the injury to the hoof has been very slight, and when the hoof has retracted on itself by its elasticity, or when the opening is concealed by the dirt of the streets. It must be remembered that sometimes the penetrating body remains broken in the soft tissues after its entrance through the hoof. If the accident is recent, only a little blood may be found—liquid or coagulated—over the wound; later, some serosity, more or less purulent, is observed; the pus is white or black, sometimes mixed with synovial fluid; sometimes there are granulations on the bodies of the wound which protrude over the edges, com-

monly covered with proud flesh. Such are the first objective symptoms obtained by the exploration of the parts. Ordinarily they are insufficient, for it is not always easy to probe the wound. It then becomes necessary at the beginning to pare off the hoof all round the wound, and sometimes to hollow it at the point of injury, without going to the sensitive structure, however. In this way the exploration and probing of the wound are rendered much easier.

The pain, expressed by the lameness, is almost always manifested; it varies according to the seat of the lesion and its depth. At first the intensity of the lameness does not give the exact measure of the disease, and often one may be led into error by it; but it gives an exact value of the lesion when a few days have elapsed since the injury was received; if the pains are slight or absent, they indicate that the reparative process is going on well; it is, on the contrary, interfered with by complications, when, as time goes on, the lameness increases instead of becoming diminished. Generally one can say that the inquiry will amount to nothing when the lameness is slight, while, on the contrary, serious complications must be always looked for when it is great and remains on long, even when the first lesion has been slight and superficial. The wound, which has penetrated through the hoof only, has no symptoms, no sequelæ; the animal is not lame from it, or if he be, the lameness is very slight, the foot resting entirely on the inferior surface; when the resting takes place only on the toe, ordinarily the tendon is injured, possibly the synovial sheath; in cases where high inflammation exists the pain is very great, the animal walking on three legs only.

The anatomical examination of the injured part teaches that the most serious punctured wound of the foot is that of the centre of the foot, where the tendon, synovial sac, and where the articulations may have been injured. Forward of this, the wound is less serious, even if it involves the bone. Posterior to it, it can only injure the plantar cushion. Under this condition the plantar region of the foot is divided into three zones: one, anterior, from the toe to the point of the frog; one, middle, extending from the first to the median lacunæ of the frog; and the third, posterior, covering the space left back of this to the heels.

(To be continued.)

ANTHRAX IN NEBRASKA.

By W. A. THOMAS, B.V.M.

The outbreak of anthrax here, last summer, first appeared the 21st of August, about one mile from Lincoln, in a fine herd of fifty cows and one bull. In two weeks thirty head were dead, and, ultimately, but ten cows were left in the entire herd. A few died in other herds. The last case that I attended was a cow that died the 24th of October, after being sick six days. She was the only one in the herd that took the disease.

The season for some weeks previous to the outbreak had been very dry and hot.

The pasture is bottom land which is sometimes inundated, and contains some marshes and ponds. It is also underlaid with impervious strata of clay. Salt Creek, a sluggish and muddy stream, passes through this bottom. A few small, scattering trees, with the sunflowers, along the banks, served as the only meagre protection for the cattle during the heat of the day.

Symptoms.—Agalaxia; anorexia; adipsia; in most cases hematuria; staggering gait; head pendent; in one instance turning and licking one arm and then the other; leaning against a post, fence or tree; rising with difficulty or not at all when decumbent; tremor of muscles in the flank and shoulder; staring eyes; respiration and temperature various; legs usually cold; pain on pressure over the metacarpals; on no other portion of the body could I detect pain on pressure except in one case upon the abdomen; sometimes swollen beneath the jaws; no emphysema; pulse strong, usually 80 to 95 per minute; muzzle generally moist; alvine excretions normal except a peculiar brown color, rarely bloody; a few cases somewhat constipated; death usually within one to four days, with or without convulsions.

Necropsy.—Muscular tissues softened; portions of the peritoneum have a yellow infiltration; blood thin, coagulates tardily and is of a blackish red color. A little blood is usually found in the ventricles of the heart. In one instance, (twelve hours after death) I found blood in these cavities firmly clotted. Pericar-

ditis; a few engorged and blackened spots in the lower portions of the lungs; the liver enlarged, softened and sometimes hyperæmic; gall bladder filled; tissues adjacent hyperæmic; the gall thick with a greenish black, pulpy sediment; the spleen very much enlarged, with contents a disintegrated, pulpy mass of an intensified maroon or blackish red color; hyperæmia and hypertrophy of the kidneys, also softening and black spots upon the capsule; the bladder generally distended and the bloody urine containing a black sediment; in one case inflammation of the small intestines; the mucus coat of the rumen and omasum very easily torn, the omasum in some cases impacted.

Histology.—At the time of the outbreak, I could not obtain a microscope of sufficient power to make examinations. I sent some of the blood to D. S. Fairchild, M.D., Amer, Iowa, who found abundance of *bacillus anthracis*. He also performed experiments of inoculation, and found that the disease reproduced itself.

TUMOR OF THE METACARPAL REGION.

BY GEO. C. FAVILLE, B.S., D.V.M.

I do not know that the case of which I write will be of any peculiar interest to the readers of the REVIEW, but it was a case that interested me greatly, as well as all the medical practitioners of the city. A gray mare, five years old, was brought to me with the request that I should remove a small tumor from her leg.

On examination I found a rather soft tumor on the inside of the left metacarpal, about midway from the knee to the pastern. Upon casting the animal and cutting through the skin, I found what appeared to be a thin fibrous tumor about the size of a goose egg. In order to save making a large opening in the skin, I opened the sac, to remove it a portion at a time. Upon making an incision into the sac I found about a fluid drachm of a blackish-brown liquid. Pressure showed the sac to be almost filled with a black, greasy, slightly granular matter, with which was mixed a large quantity of perfectly-formed hairs. The wall

of the sac, instead of being, as I had supposed, a fibrous capsule, was a true cuticle turned wrong side out. It was lined with well-formed hairs about an inch in length and dark colored. Now, the question with me is, was it a true melanotic tumor or more of the nature of a demi-cyst?

The microscope showed the pulp to contain large quantities of fat drops and epithelial cells and brown pigment granules, as well as calcareous deposit.

The animal never had sustained any injury of which I could learn. The tumor had been there for three years, with no perceptible change, and never had shown the least soreness or inflammation.

TRICHINÆ,

A LECTURE DELIVERED BEFORE THE STUDENTS OF THE
AMERICAN VETERINARY COLLEGE.

By F. S. BILLINGS, V. M.

(Continued from page 449.)

THE INTESTINAL TRICHINÆ.

So long as the trichinæ remain encapsulated in the fibres of the muscles, their condition remains unchanged. They make no progress in their development, irrespective of the number of years that they may have been encapsulated. They have been seen in an active—*i. e.*, capable of progressive development under conformable circumstances, yet encapsulated—condition, 13, 20, 24 years from the time at which their invasion took place.

(a.) In 1861 a woman was admitted into the hospital at Altona, a suburb of Hamburg, Germany, suffering from a cancer of the breast, which had been developing for some twelve years. On removal of the same, and subjecting portions of its tissues to microscopical examination, the presence of trichinæ in the muscular fibres was manifested. On inquiry, it was ascertained that in 1856 the woman resided at Davenport, Iowa, where she was taken suddenly very ill, gastric and rheumatic phenomena being

most manifest of any, together with œdema of various parts and paralytic phenomena. Her brother, with whom she resided, was attacked in a similar but not in so severe a manner at the same time.

The woman died at the hospital in question in 1864, and the examination of her muscles revealed the presence of great numbers of encapsulated trichinæ. A cat fed with pieces of these muscles died after the lapse of sixteen days, its muscles being repletely infected with these parasites.—*Boston Medical and Surgical Journal*, 1866, Vol. LXXIV., p. 186.

(b.) Virchow relates a case, where after the lapse of *thirteen and one-half years*, the parasites moved in their capsules on prolonged exposure to the heat of the sun.

(c.) Dr. Klopsch reports a case of trichinosis and complete recovery, which took place in 1842. Discovery of the encapsulated parasites in the muscles 24 *years* after invasion. The discovery of the parasites in this case was also made at the time of excision of a mammary cancer, which took place May 6, 1863. At the same time that the woman in question was ill, in 1842, two persons in the same house became sick, presenting similar phenomena; both died.—*Archives fur Pathology and Physiology*, B'd 35, p. 609.

*Professor Damman, formerly of the Eldena Agricultural Academy, Germany, reports a very interesting case illustrating the longevity of embryonal trichinæ in the muscles of a hog.

This hog was fed with trichinous meat in November, 1864, and in February, 1865, presented to the experiment station at Eldena. Since that time the animal had been kept isolated in a pen by itself, unless taken out for examination. On the third of February, 1875, and the twelfth of February, 1876, Damman removed a small piece of muscle from the shoulder. At both times the microscope demonstrated the presence of living trichinæ. A considerable piece of flesh was removed and fed to two rabbits, and eighteen days subsequently their muscles were found to be plentifully infected with the parasites. This case demonstrates

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beyond all question the presence of living trichinæ which were capable of maturing, fructifying and developing young when fed to other animals, for a period of eleven and one-quarter years from the time the invasion of the hog first took place.

Although the encapsulated trichinæ suffer no changes while confined in the muscles of a living organism, yet the introduction of portions of such muscles into the intestinal tract of man, or other suitable animal, causes rapid changes in their condition. The processes of digestion soon set the embryonal parasites free from their encapsulated condition, three to four hours being sufficient to the purpose; the freed parasites rapidly complete their development, becoming matured trichinæ; 30 to 40 hours are in general sufficient to complete this metamorphosis. In cases of fresh invasion, when the capsules have not become hardened to any great degree, 24 hours have been found sufficient to demonstrate the presence of sexually matured trichinæ in the intestines of animals fed with such flesh by way of experiment. Nevertheless, one often finds parasites still enclosed in their capsules on the third day after feeding such flesh to an animal.

There is scarcely another helminth by which this matured stage is reached in so brief a period.

Under these circumstances, it must be evident that the changes necessary to maturity, by these parasites, must be of a very insignificant character.

As a rule, sexual connection takes place within two days from the time the trichinæ become free.

The parasites increase in length and thickness, and in the female the uterus fills with fructified ova, which soon develop into embryos enclosed in the body of the female.

The female intestinal, or matured parasite, lives from five to six weeks, and produces at least 1,500 embryos, (Leuckart.)

The newly-born embryos are at first buried in the mucous which lines the intestinal tract; a microscopical examination of such mucous will reveal them as free and movable parasites. The embryos soon begin their migration and dispersion over the organism, the first act being the penetration of the intestinal parities. It seems still to be a matter of discussion as to the

means or ways by which further migration takes place. Some authorities, and among them the most eminent, as Leuckart, Furstenberg, Gerlach, favor the view that the parasites proceed by the way of the mesenterium and connective tissue tracts over the system, and penetrate the sarcolemma, or connective tissue membrane of the muscle fibres, to lodge in the substance-plasma of the same. Here the parasite develops a capsule or bed, of a finely granulous character, for itself, the sarcous elements of the fibres becoming wasted or used up, and the striation of the fibres lost, so far as the capsule of the parasite extends. The sarcolemma of the muscle fibre forms a thickened, secondary capsule around the parasite.

Another view, the possibility of which is conceded by the above named authorities, to a minor degree, is that the parasites gain access to the circulation, and are transported over the system by the moving fluid, boring the smaller vessels at convenience, and in this means gaining access to the muscles. An enthusiastic defender of this theory is Dr. Thudicum, an English observer. Were this latter the principal path of dispersion, however, we ought to be able to find numerous examples of the parasite in the circulating blood of living animals which have been subjected to feeding experiments. This has not been the case, however.

Thus it is evident that the host or consumer of trichinous flesh provides the means for its own infection.

While this is in general the manner by which infection takes place, it by no means excludes the possibility of the infection of an animal taking place by intestinal trichinæ which have passed from an already infected organism with its fæces. In this way an infected swine may infect others, or in fact give occasion to a secondary infection of itself, by rooting the manure of its pen. In the same way swine may become infected from infected men, where, as is too often the case, the out-houses for the family are placed over the piggery, or lead into it; or where the contents of the same are thrown into the piggery for the swine to work over.

Thus we see the cycle of infection may frequently continue from swine to man, and man to swine. The trichinæ may be assumed to be regular cosmopolitans. They have been discov-

ered in Germany, England, Scotland, Denmark, Sweden, France, Italy, North and South America, Africa, India, Australia, Spain, Egypt and Syria.

In fact it may truly be said that trichinæ have been found infecting pork in whatever land and wherever they have been sought for.

Trichinæ have only been unquestionably found in warm-blooded animals, that is, by natural invasion, viz., man, cats, dogs, rabbits, mice, rats, foxes, the marmot, wild hogs, and even the hippopotamus. Gerlach has produced them in calves and the horse by feeding experiments, while Liesering was unable to produce invasion in the horse.

Several reports have been published with reference to the discovery of trichinæ in fish and other cold-blooded animals, but they are of a questionable nature, and non-conformable to our knowledge of the activities of the parasite. They become torpid at a temperature but little below that of the normal mammal. They do not seem to affect fowl, but have been found in the goose. In this regard I made quite a series of experiments with hens:

First.—I fed them in the natural way, with a large quantity of highly infected pork. Results, negative.

Second.—Assuming the triturating power of the gizzard might have power to destroy the parasites, before they could gain access to the intestines, I caused a quantity of infected pork to be hashed until it became a veritable mush, and contained, by microscopic examination, numerous *free trichinæ*. This mass was then stirred up with water at 40° C., into a sort of thin gruel, and injected into the intestines of the hens, after they had first been washed out with warm enemas. The injected mass was kept from flowing out by artificial means; but although the hens lived, infection did not take place.

Third.—The abdominal cavity was opened in quite a number of hens, and the above mass, two tablespoons, put therein, the wound being afterwards carefully sewed up. Notwithstanding this insult the fowls lived, but no muscle trichinæ at the end of a month.

I hoped to carry these and other experiments on, but failing the means to the purpose, was obliged to give them up.

(To be continued.)

PATHOLOGY AND TREATMENT OF PARTURIENT FEVER.

(A paper read before the College Association of the A. V. C.)

BY G. S. AGERSBORG, Vet. Student.

Mr. President and Gentlemen—The subject allotted to me for reading is on "Pathology and Treatment of Parturient Fever." I have had ample time, but the subject is stupendous, at least to a first course student spending his vacation on the frontier with limited personal data, and access to libraries impossible. However, we will present a few thoughts on the subject.

Puerperal fever is a term of fearful import, even in this day of enlightenment, and for centuries preceding the present was almost the synonym of death. But to-day, thanks to the scientific spirit of the age, if this terrible disease still confronts us with a fearful mortality, it is infinitely less than formerly, and we may reasonably hope that with the dawning of the 20th century will come the answer to what now is a subject of speculation and doubt, viz., its causation, which to-day in many cases is fairly pointed out, yet in many instances answered only by hypothesis open to distrust. A discussion of puerperal fever is a discussion of blood-poisoning in the majority of, if not in all cases; lesions of continuity in the generative tract of the recently delivered female being the gateway through which pass the autogenetic and heterogenetic morbid agents that form the main pathological elements of the disease, "the morbid opportunity," as Trousseau so tersely expresses it. Nearly all writers, as far as we know, on this subject, include under this head cases of metro-peritonitis, so we have various pathological conditions to deal with under the name of parturient fever. Here, if we may be permitted to venture our own opinion, we would withdraw metro-peritonitis from the

discussion under the head of parturient fever; it seems to us there can be no good reason for continuing to discuss such a condition as a fever. True, the condition is the most common of all that befalls the parturient female, and yet is just such as would follow mechanical injuries to the uterus at its serous investments from any cause. Such a case, we opine, differs in no way from one caused by injuries to those organs from instruments, operations, blows, wounds, &c., in the non-parturient female. If it be found, however, that the introduction of morbid agents by the instruments, or hands of the obstetrician, produce such conditions, if it be found that metro-peritonitis is a link in the chain of blood-poisoning, then our premises are untenable; but we do not think this can be shown. Thousands of cases of so-called parturient fever are cases of septicæmia and pyæmia running their well-marked courses, without inflammation of the uterus, or involving either the pelvic connective tissue, peritoneum or abdominal peritoneum; but almost invariably affecting the serous investment of the lungs. Most authors hold to the doctrine, and teach the autogenetic origin of parturient fever. It is said that decomposition of retained placenta, secundines, blood clots, &c., enter the circulation by the lymphatics or blood vessels. If by the latter, through the patulous sinuses at the placental site, often through wounds or rents in the cervix uteri, or in primipara by way of the ruptured fourchette. Even the lochia, we are informed, pouring over the wounded parts, may impart the dreaded virus. We accept all this, but we also hold that a primary cause may exist, viz., "a pathological aptitude," a disposition in the blood of the parturient herself. If you ask why, we answer, because the cervix is almost invariably lacerated more or less at each delivery, and especially is this true of primipara. Portions of the membranes are almost always left to decay, and blood-clots in a state of decomposition pass over these abraided surfaces daily, and yet no blood infection takes place. Again, most of you have met with examples of a dead fœtus being retained in utero for weeks, nay, months perhaps, and yet there was neither metritis, or peritonitis, or blood poisoning. It is a common practice among country practitioners, and probably some city

ones, to allow the placenta, in cases of abortion occurring in the earlier months of gestation, to decompose and slough away, sometimes requiring weeks for its accomplishment, and yet accidents from such causes are exceedingly rare. Is it not true, that while a dissection wound destroys the life of one, it is perfectly innocuous to another? I know a gentleman, an industrious dissector, who very often wounds himself, even when engaged on the worst subjects, and yet experiences no inconvenience therefrom; also another who hardly dare touch a subject, having more than once nearly lost his life from erysipelas, caused by assisting at post-mortem examinations, although receiving no wound. Here, then, we have an illustration of two conditions: in the one we have the pathological aptitude, as some one has called it, and in the other no such condition exists. In the one we have plastic, in the other aplastic blood. Were the two above mentioned gentlemen females, there can be but little doubt how the perils of maternity would be surmounted in either case. The one would survive almost any accident, and the other scarcely the most trifling. But now let us go back. We have expressed the idea that metro-peritonitis had no relation to any condition that could be properly denominated parturient fever, or any other kind of fever. If we are to have any parturient fever at all, it seems to me high time we should confine the title to parturient septicæmia. Again, we said the generative tract of the newly delivered female was the gateway through which passed the materies morbi. Now, what is this morbid agent—is it always decaying or dead animal matter? Surely not always. Quite recently I heard of a woman who had well marked scarlatina, from which she died fourteen days after confinement—a primipara in her 20th year, her previous health had been good, in fact vigorous. but the environments were wretched. Previous to her confinement she had lived in a basement with decaying wooden walls, the house had been banked up with manure from the barn-yard the previous winter, which still remained at the time of her confinement in late summer. Now, this woman died of scarlatinal poison, and yet none of the rest of the family suffered from it.

Does not this case fairly illustrate the pathological aptitude

referred to in the beginning of this article. If we watch a case of pyæmia develop in a wound, do not the first changes take place in the wound itself? First it ceases to granulate, and assumes a livid, unhealthy aspect, discharging a dark, unhealthy pus; this preceeds blood infection several days; but we know what to expect; we know the fatal and terrible chill is not far off. Surely all this proves fairly that the primary cause is local, and if this be an isolated case it must have been atmospheric. Recent discoveries of bacteriæ in decaying animal matter, and the blood itself, and the presence of cryptogams in the blood and urine of persons subject to malarious poison, fairly prove the truth of the germ theory of disease. The antiseptic treatment of Lister and other great surgeons prove also the truth of this theory. We have no doubt, could the interior of the uterus be treated perfectly after delivery, the antiseptic dressing in the form of spray or injection, we would have much less of the so-called parturient fever. When we know how readily the healthy mucous surface takes on the virus of syphilis, how often it is imparted to the lips and mouth by kissing, by pipe-stems, wind instruments, etc., how much more readily will the intra-uterine surface after delivery, denuded by its epithelium, by its sloughing decidua, take on, or rather transmit to the blood bacteria, cryptogams, etc.

In regard to treatment, we can hardly disagree. Peritonitis claims opium in large doses; septicæmia, antiseptics, salicylic acid, chinin, etc.; pyæmia the same, with addition of chloroform. But better than all is prevention. First let no man who has come in contact with such a case go forth a walking pestilence, spreading ruin about him; time and disinfection will remedy this. We have all heard of the unfortunate Philadelphia physician who, suffering from an ozæna, no doubt malignant, destroyed every woman whom he delivered, the index-finger of his right hand conveying death from his nose to the genitalia of his patients. And the case of Dr. Arnette, of Vienna, when a parturient female with cancer of the cervix was admitted into the lying-in ward, and examined by scores of students, who infected fourteen lying-in women, three of whom

died; but in palliation, let me say this was in 1848. But this is a digression. What should we do in any or all cases to prevent the possibility of danger? We suggest, nay, we insist, that in every case the uterus should be injected immediately after delivery with an abundance of warm water, holding in solution permanganate of potassa, carbolic acid, or simply vinegar; then, above all, shut the uterus lightly, give ergot in large doses, or, better still, ergotine hypodermically. Let the obstetrician never leave his patient till the uterus has been at least partially contracted and well down in the pelvis. The case will be safe then, not only from infection from without, but from hemorrhage within.

Before closing this article we will introduce one case illustrating death from a mechanical injury to the uterus, occurring in a cow exhausted and depleted by travel and insufficient food. When called to see her she had just stopped from a journey of three hundred miles, was a primipara in the ninth month of gestation; there were no symptoms of labor at the time, but the patient was suffering from hoven, caused by over-feeding. We relieved her of the hoven; she was apparently well until forty-eight hours after, when labor developed, and from foetal dystocia the foetus had to be extracted. This I accomplished easily, delivering a decaying foetus, placenta and membranes being delivered intact. In forty-eight hours the animal was attacked with chills, succeeded by fever, death taking place in twelve hours. Post-mortem revealed a foetal hoof in the uterus, with lesions of continuity in the mucous expansion of the uterus. It is a fact well-known to veterinary surgeons that cows rarely fall victims to injuries from labor; the most serious usually recover. But here we have again the pathological aptitude on account of the reduced condition of the animal from travel and starvation.

And now, gentlemen, in closing, we ask you to be sparing in your criticism of our crudely-expressed ideas; we have given them because it is part of the curriculum, and not expecting to make a contribution to veterinary science; we are not a patriarch in medicine, but a humble student of veterinary surgery.

EDITORIAL.

SHALL STATE VETERINARIANS BE APPOINTED ?

No one will deny that the various attempts which have been made during the last few years to establish veterinary colleges in the United States, and the success that have been met with by some of those institutions, have done much to elevate the profession in the eyes of the public. But there is also another reason for the advance made by veterinary medicine, and that is the need of her practitioners, which presented itself because of the presence of contagious diseases amongst our live stock—diseases which were destroying so many animals, and interfering not only with our home trade, but also having in recent years diminished the extent of our foreign exportations. It was then that we saw the appointment of veterinarians by the General Government to investigate some of those affections. The first one, we believe, was made in 1868, given to Prof. Gamgee, who was requested to investigate the disease known as Texas fever, and from that time also, we believe, began the connection of veterinary surgeons with Boards of Health.

Since then other appointments were made from Washington by the Department of Agriculture, so as also to rid some of the Eastern States from the ravages and dangers of the bovine lung plague—contagious pleuro-pneumonia. State commissions were appointed, in which the true labor of inspection of diseased animals and suggestions of sanitary measures were trusted in the hands of various veterinarians. And in this way, by degrees, the veterinary surgeon found in the eye of the public the appreciation of his profession.

But all those appointments were only temporary ; they were only for the time when public anxiety was excited by the dangers ahead, whether at home or abroad, and every one knows that the life of these commissions has been generally short. The need of their existence remained, however, the same, and we have no doubt that it was from that need that some of the Legislatures of the different States thought of the creation of the positions of State Veterinarians.

The Western States, which are more or less threatened by the

invasions of contagious diseases from the East, were the first to take the lead in these appointments, and it is thus that we found the appointment of our esteemed associate, Dr. Paaren, named as Veterinarian of the State of Illinois. It is known that attempts have been made in other States, and the probabilities are that before long, Nebraska, Iowa, Wyoming Territory, and others will follow in the ranks.

The same question, however, as far as we know, has not seemed to be as favorably considered in the Eastern States, for we believe that so far Connecticut is the only State where the question has been agitated; in fact is so much so now that there is a great deal of feeling existing in that State as to whether a State Veterinarian is a necessity or a superfluity.

Speaking of this subject, an article has appeared in the New England *Homestead*, which says, after discussing the need of the appointment:

"There would be about as much sense in asking the Legislature to appoint a State physician, giving to such person exclusive medical privileges over the mass of practicing physicians. The State does appoint its Board of Health, whose duties may be said to be similar to those of the cattle commission; now how would it look to abolish that board and appoint a State physician? And while in the line of appointments, why not appoint a skillful physician of the soul to look after the moral diseases of the people and provide for them? If such a course as that was to be pursued and satisfactory results arrived at, it is quite probable that all objections to the cattle commission would disappear, as would also the desire for the appointment of a veterinarian. It will be time to meddle with the existing condition of things when there is a popular cry coming up from the mass of farmers in our State, but until that time it is best for legislators to be slow of being led away by the pretensions of any parties who, from any jealousy or ambition, may urge action that is not sought for nor demanded by those who are most affected thereby."

Now, all this is very well, and to a very great extent we are of the opinion of the New England *Homestead*, which claims that as long as there is a cattle commission in the State which fulfils its duties to the general satisfaction of the people, there is

no need for the formation of a new office—that of a State Veterinarian. We do not see the true necessity of forming a special office for such State officer. But we must most emphatically insist on the necessity for the creation of such positions, and of its being connected with the State Board of Health. It is there, we believe, that the offices of the State Veterinarian belong—offices whose duties are so intimately connected with the general health of the people, he will then render in that direction services which could be appreciated, and which would show the usefulness of his profession. If State Veterinarians were connected with Boards of Health, their labors would not only touch this or that peculiar form of diseases, they would not only be obliged to look after pleuro-pneumonia, but after all those diseases which are met daily in our large cities, glanders, farcy, and in our country districts not only those, but anthrax, hog cholera, foot and mouth disease, &c., &c. And besides that, they could also exert their professional influence in one direction of our general laws of health, in the inspection of abattoirs, of markets, of meat, which we all know are yet in the hands of men entirely ignorant of the first principles they ought to possess.

No, the office and positions of State Veterinarians cannot be compared to those positions of State physician or State doctor of the soul; it has a national excuse and reason for its creation, but we do believe that it is with State Boards of Health that it ought to be connected, as it is in most parts of Europe.

PATHOLOGICAL PHYSIOLOGY.

UPON THE CONTAGION OF TUBERCULOSIS.

BY M. H. TOUSSAINT.

The facts of contagion of tuberculosis that I have presented, and the objections made against them, have encouraged my investigations, whose programme embraces to-day over two hundred and twenty experiments—my principal object being the

contagious nature of that disease and its dangers in the point of view of hygiene.

When I begin the study of a contagious disease my first thought is to find the animal upon which the disease develops itself with most certainty and in the shortest time; such of my experiments were carried on with rabbits, pigs and cats. For the same reason anthrax was studied by others upon rabbits, because the disease is rarely spontaneous in that animal.

It is the same in pigs; I have seen that tuberculosis kills as surely these two species of animals as anthrax destroys the rabbit.

I believe, so far, that the susceptibility of the human species is still greater, and it seems to me very probable that if children, or even adults, were inoculated with tubercles, very few would escape contagion. A disease which kills the fifth of a species of animals is certainly a disease of that species. Tuberculosis is surely a disease of man, and when it exists under the form of germs in a great quantity of the aliments that we eat daily, is it too pretentious to say that sufficient conditions of hygiene to prevent this enormous mortality ought to be taken?

Tuberculosis of man is, then, the same as that of cattle; when inoculated to animals it produces lesions absolutely alike, susceptible of being transmitted to other animals, and to reproduce itself constantly with the same characters and forms. I convinced myself of this fact in feeding animals with human tubercles or by inoculating through the blood. As tuberculosis of cows, that of man is inoculable through the digestive canal, the blood, the liquid of secretion, and it always assumes identical characters.

It is true that it will be said that tuberculosis is communicated equally by inoculation of inert substances, but here explanation is necessary. It has been proved by numerous pathologists that one may produce almost at will lesions similar to those of tuberculosis; I have seen many similar complete cases; but this disease, so easily given, cannot be reproduced by the inoculation of the tuberculosis so obtained.

These experiments prove one thing, that the *histological*

lesions, by which tuberculosis was supposed to be characterized, are insufficient. To produce true tuberculosis in this way, susceptible of being inoculated, I deny; *experimental tuberculosis* remains an artificial fact.

True tuberculosis, taken from man, cow, pig, or rabbit, can be reproduced in an unlimited number of series; constantly, with the *absolutely identical characters*, it may pass from one animal to another without failing in its effects. I will say more. It becomes more powerful and rapid in its action as it is oftener inoculated. I might show numerous facts of series whose experiments are preserved. At first tuberculosis required four to five months to kill a pig or a rabbit; actually with five series two months are sufficient. General infection having taken place after thirty-five days, if at that time an animal is killed and another inoculated, this will die before the first.

It is especially in the tuberculosis produced by culture that the increase of virulency is observed. The serosity of the caseous ganglion of a cat, which died after an injection of culture, was inoculated to six rabbits; all became tuberculous. Forty days after one was killed; he already presented pulmonary deposits, which were inoculated to six rabbits and a pig; the pig died in fifty-seven days, and one of the rabbits in sixty-eight. At the present time animals of the fifth series are sicker than those of the third.

This is observed with the cultures; the fifth series are more abundant and rapid than the first, the tenth than the fifth. It seems that the microbe becomes acclimatized. A rabbit which, five months ago, received eight drops of an eighth culture in the jugular, has just died with a lung full of granulations, some also existing in the kidneys and the spleen.

I may again cite a pig, inoculated with vaccine cultivated upon a cow, which had been killed, and presented a handsome generalized tuberculosis.—*Gazette Medicale*.

EXTRACTS FROM FOREIGN JOURNALS.**VOLUMINOUS URETHRAL CALCULUS IN A COLT. PERINEAL URETHROTOMY BY REPULSION OF THE STONE. RECOVERY.****BY M. A. VANDERMIES.**

The subject of the case was a stallion, two years old. His symptoms were as follows: general condition good, incontinence of urine, which is clear, limpid, normal in appearance, running out by drops, especially when the animal is in motion; at times efforts to micturate, often useless, at times followed by a strong stream of urine; ulcerated wound at the free border of the sheath; diagnosis is made of paralysis of the bladder. A year later same symptoms, but somewhat modified, urine is cloudy and sedimentous, ulceration of the sheath is enlarged, penis seems atrophied; gravel or stone in the bladder is diagnosticated.

Later on, the wound of the sheath has closed under treatment. On the 28th of March, 1881, the animal is unable to pass water; he lies down and gets up continually, assumes the dog-sitting position, and when standing is perched against the wall with his hind quarters. This last, says the author, is a position always indicating an obstacle or an alteration of the posterior part of the intestinal canal, of the urethra or of the bladder. Rectal examination reveals in the floor of the pelvis, in the urethra, near the posterior border of the ischium, a hard tumor. It is a large calculus lodged in the urethral sinus. The left hand introduced in the rectum, the stone was pushed well back to bring it to the surface as much as possible. An incision was then made directly upon it and the calculus enucleated, so to speak, at once. It measured 9 centimeters in length, 5 in width, and weighed 180 grammes.—*Annales de Brussels.*

RABIES IN A MARE. FRACTURE OF THE JAW.**BY M. PALAT.**

Aged eight years, is admitted to the hospital for punctured wound of the foot. 24 hours after she tries to bite and kick the

horses next to her; she is then isolated and secured. Soon she presents all the symptoms of rabies. She bites everything she can take hold of, opens her mouth and seizes with ferocity all that is close to her. Her agitation is extreme. She takes hold of the manger and her mouth is all bloody. She bites a handful of hay but does not chew it or swallow it. She dips her head in a pail of water, seeming to bite the liquid. She kicks forward and behind with rage. Her perspiration is abundant as well as the urinary secretion. The sight of a dog does neither increase or diminish the access. She is constantly in motion and at last seizes the manger and fractures the superior jaw. Then exhausted, drops down and in fifteen minutes dies, less than three hours from the appearance of the first symptoms.—*Recueil de Medecine Veterinaire.*

EFFECTS OF THE PAPAVER RHÆAS (COQUELICOT)
UPON TWO COWS.

By M. E. BARBE.

The 14th of June, 1880, the author was notified by a farmer that his two cows were affected with epilepsy. On inquiring as to the mode of feeding, he was told that the evening before they had received grass containing a large number of coquelicots (corn-poppies), and that they had shown no bad effect from it. They received another feed of the same kind that morning. This time the toxical effects were not long in showing themselves. Soon after feeding one was noticed dull, restless, scraping the floor with her fore feet. The eyes became swollen, the look anxious, the pupils dilated. The abdomen was distended, the tail and ears continually agitated, abundant perspiration, respiration accelerated, pulse probably was full and nervous; to the excitement succeeded coma. According to the owner, in this comatose condition, the animal held its head down to the ground, or resting on the manger; eyes partly closed; then the animal would suddenly fall down, to get up a moment after. In moving, she stumbles at each step, pushing forward.

The second cow shows the same symptoms but struggles more, and her convulsions are more marked.

These symptoms lasted two hours and a half. During that time the first cow had four fits, the second only three, but they lasted longer.

Not knowing what to do, the farmer gave them a quart of black coffee. The symptoms subsided but the cows had several fits afterwards.

At the visit of Mr. Barbe, he found them quiet, but exhausted and very weak; the pulse was regular, the ears neither cool or warm; their walk was staggering, but without fall; the eyelids somewhat swollen, conjunctiva normal; pupil but little dilated; on the whole recovering. Coffee was continued, low diet, and recovery perfect in a short time.—*Recueil de Medecine Veterinaire*.

FUNGOID ARTHRITIS IN THE FIG.

By M. REQUIER.

Requested as inspector of meat to visit a young pig, which was to be killed and sent to market, and having noticed in him no disease which could be injurious, permit was given to take him, but having observed a lameness of the anterior extremity, the knee of which was much swollen, this was dissected.

The left anterior leg is much sprung at the knee and on the anterior part of the hoof. The knee bent forwards, is considerably swollen and immovable; there seems to be carpal ankylosis. The skin of the knee is of a red-purplish color, and strongly adherent to the tissues underneath, by the transformation of the connective tissue, which is hypertrophied and degenerated. This tissue is almost cartilaginous, and can scarcely be cut with the knife. Sections made in all directions through it show at places oval cavities of various sizes, with walls as hard as the surrounding tissue. Their contents are grayish, caseous in consistency and look like insissipated pus. Upon longitudinal section they have a marbled aspect, and seem subdivided in small cavities by a greyish pale connective tissue.

These lesions were observed upon the lateral and especially the posterior face of the knee; the anterior is free from them. The articular surfaces are red, the synovia slightly rosy.—*Journal de Zootechnie*.

SUBCUTANEOUS HERNIOTOMY.

BY M. SARCIRON.

A barb stallion is taken with slight colics while exercised. He is agitated, paws, stretches himself behind, looks towards the left inguinal region, does not lie down; the loins are stiff, walking difficult, respiration and circulation accelerated, pulse small. The left testicle is much swollen, hard and painful to pressure, the vaginal sac is distended, spermatic cord hard and painful. By rectal examination a portion of the intestine is felt in the inguinal ring.

Diagnosis.—Acute inguinal hernia, with serious prognosis.

Having failed to reduce it by taxis, and with hope to save the animal as a stallion for breeding purposes, he was operated upon by the author as follows:

The animal being etherized, the left testicle held by the operator with the left hand, with the straight bistoury, an incision two and a half centimetres in length was made from forward backward, upon the most prominent point of the external side of the testicle. The scrotum and dartos are opened with curved scissors and the index, the cellular tissue underneath uniting the erythroid and fibro-serous layers is isolated and these membranes exposed as far as their superior portion. This is then slightly punctured with the straight bistoury a little below the inferior inguinal ring, the puncture being enlarged with the straight scissors turned from backward forward, sufficiently to admit the index finger. The upper edge of the wound is raised with a tenaculum and the testicular mass is depressed downwards. The left index, carefully oiled, is easily introduced in the cavity of the sac, and feels without difficulty its contents. Above, the canal is closed; the intestines and the cord above the inferior opening are strongly strangulated. An ordinary blunt bistoury is then introduced, resting upon the index, as a guide, its sharp edge turned backwards, gently pushed beyond the strangulation, and by a slight motion outwards the fibro-serous covering of the sheath is divided. Though the strangulation is reduced, it is not sufficiently to allow the return of the intestines; the hand in the rectum then siezes it and

a slight traction returns it into the abdomen. A stitch is made in the outside opening, and the animal allowed to get up. The animal made a rapid recovery, and was used as a stallion for over a year. He, however, ultimately died from a second attack of inguinal hernia of the left side complicated with rupture of the bladder.—*Archives Veterinaires.*

FOREIGN BODIES IN THE ŒSOPHAGUS OF RUMINANTS. A NEW
PROBANG.

BY M. JOUANNE.

This method consists simply in using a piece of rope (easily found on all farms), or taking that of the main hobble, and using it to push the alimentary bolus into the stomach, and is principally useful when the foreign body is in the thoracic portion of the œsophagus. The author proceeds as follows: the puncture of the rumen being done, if the canal is very distended, a piece of rope about 1 meter 50 centimeters long is moistened with warm water and then oiled, and introduced in the œsophagus as a probang, twisting it in the direction of the threads of the rope so as to facilitate its introduction. This wet rope is sufficiently rigid to apply a strong pressure upon the foreign body to displace it, and push it into the stomach, while by its flexibility it allows all motions of the neck without any danger to the animal.

Mr. J. has used this treatment on two occasions with entire success.—*Archives Veterinaires.*

A PROLIFIC MULE.

This is a curious case of fecundity in a *mule*, at the Jardin d'Acclimatation.

A small African mule, 17 years old, has had the five following products:

The first two were from the meeting with a barb stallion. Both were females and form a handsome team. They have the head, ears, mane, tail and feet of their sire.

The third product is a male, dappled grey, whose sire was a thoroughbred white donkey. He resembles more the dam than the sire.

The fourth is also a male, of dark color. His sire is a donkey of Nubian breed. He partakes of both sire and dam.

The fifth is again a male, dark bay, produced by a barb stallion, which the little animal resembles completely.—*France Chevaliere, (A. V.)*

FRENCH VETERINARY SCHOOLS.

NEW REGULATIONS.

CHAPTER I.

Veterinary Schools.

Sec. 1. The National Veterinary Schools of Alfort, Lyons and Toulouse, are placed under the authority of the Secretary of Agriculture and Commerce, and under the survey of the Prefects of Departments in which they are situated.

Sec. 2. The régime of the schools is the internal. However, the Secretary may grant students, who may ask for it, and with the advice of the council of the school, the authorization of following the courses as external students.

Foreigners are admitted in the veterinary schools on the same conditions as home students.

Sec. 3. The fee of the school is 600 francs a year, payable in three terms, viz: on October 1st, 180 francs; on January 1st, 180 francs; April 1st, 240 francs. External students are admitted by paying at the same dates, and in proportion, a scholar fee of 200 francs a year. Besides the fees of the school, both internal and external students are obliged to pay, at the beginning of each school year, 50 francs, for objects destroyed or lost by their fault.

All students, both holders of free scholarships and those paying fees, are obliged to furnish at their own expense, their clothing, and the books and implements necessary to their education.

Sec. 4. 70 free scholarships and 140 half free scholarships for

boarding students, are distributed between the three schools by the Secretary of Agriculture and Commerce.

These are granted according to the rank of the students after the examination of admission, or those for passing to a higher class, after they have given proof of the insufficiency of their pecuniary means or of that of their family to pay the whole or partial fee of their education.

They are only granted for a scholar year—they may be continued in favor of the student who may have proved worthy of it by his conduct or his advance in his studies.

Sec. 5. Students have regimentary uniform, designated by the Secretary. This cannot be changed in any way, even outside of the school.

CHAPTER II.

Admission of Students.

Sec. 6. No one is admitted except by way of examination.

This takes place every year in each school at a fixed time.

Sec. 7. To be admitted to this examination, each candidate must be seventeen years of age at least, and not more than twenty-five, on the 1st of October of the year the examination takes place. No allowance on account of age is granted.

Sec. 8. The application for admission to the examination is made on stamped paper to the Secretary of Agriculture, either directly or through the prefect of the Department where the candidate resides.

It must be accompanied by the following :

- 1st. The certificate of birth of the candidate.
- 2d. One from a physician showing that the applicant has had small pox, or has been revaccinated within at least three years.
- 3d. A certificate of moral character granted by the principal of the establishment where the candidate terminated his last year's studies or by the Mayor of his last place of residence.
- 4th. On stamped paper, an obligation of the parents to guarantee the payment of the fees during the time the candidate shall be a student.

This must be endorsed by a correspondent living in the vicinity of the school, in case the parents of the candidate are not inhabitants of the locality where the school is situated.

Foreign students must settle their obligation by having it endorsed by a correspondent living in France, in his proper name, an obligation which renders him personally responsible.

All these certificates must be properly certified.

Sec. 9. Applications for free scholarship made by entering students are directed to the Secretary, through the Prefect of their Departments before August 1st. They are sent to the municipal council of the locality of the family of the candidate, so as to allow it to report as to the pecuniary position of the family. The deliberation of the council is transmitted to the Secretary by the Prefect who endorsed the same.

Students already admitted, may apply also for free scholarships at any time of the year, but receive no granting until after the examinations of the end of the year.

Sec. 10. Candidates are examined according to a programme laid down by the Secretary, and published yearly in the *Journal Officiel* before the 1st of April.

Candidates, holders of titles from any university or diplomas of governmental schools, implying the possession of knowledge superior to that of the programme, are admitted without examination.

Sec. 11. The Board of Examination for admission is nominated each year by the Secretary on the proposal of the Director of the school. He marks the list of the candidates admitted. The Secretary closes the list of the students admitted according to their rank and the number of vacant places in each school. He also decides as to the free scholarships.

The list of admitted students, also as that of the scholarships, is published yearly in the *Journal Officiel*.

CHAPTER III.

Curriculum.

Sec. 12. The length of studies in the veterinary schools is four years.

The curriculum embraces the following branches:

Physic, meteorology, chemistry, pharmacy and toxicology, natural history and materia medica.

Anatomy of domestic animals and external form of the horse.

Physiology of domestic animals, teratology and general therapeutics.

Pathology of contagious diseases, sanitary police inspection of meat, legal medicine and veterinary jurisprudence.

General and medical pathology and chemical studies—surgical pathology, operative surgery, art of shoeing—hygiene and zootechny.

French literature and the German language.

Sec. 13. Any student found, at the end of the year, after the examination, unable to pass to a higher class, will be discharged.

However, under proposal from the Council of the school, the Secretary may allow students, somewhat deficient, the privilege of following the past course over again, if there is a prospect that their own efforts may be more successful at the next examination. This allowance, however, can be granted but once to the same student. This last section does not apply to students whose study may have been prevented by sickness or similar disabling circumstances.

Sec. 14. Diplomas of veterinary surgeons are delivered each year by the Secretary of Agriculture and Commerce, to the students named by the Council of the school as having satisfied in a complete manner all the requirements at the end of the studies.

To be admitted to this examination, 100 francs must be deposited as payment for the diploma. In case of failure to obtain it, this sum is returned.

CHAPTER IV.

Personnel—Faculty.

Sec. 15. Each veterinary school is administered by a Director, named by the Secretary.

The authority of the Director extends over every part of the service of the school.

He corresponds with the Secretary and communicates to him all the circumstances relating to the regular progress of the school.

Sec. 16. The personnel of each school is composed as follows:

The Director, professors and adjunct professors, whose number is fixed by ministerial decree.

The Director may have his chair filled by a supplementary professor.

Sec. 17. Professors and adjuncts are appointed by the Secretary of Agriculture after public competition before a special board.

Sec. 18. In the absence of candidates for adjuncts, their duties may be delegated to auxiliaries named for three years. These are named by the Secretary on the proposal of the Director and advice of the Council of the school, endorsing the nomination of the professors of the chair to which they are to be appointed. They are known as Demonstrators (*repetiteurs*).

Sec. 19. In all the cases where examination is to take place, the composition of the board of examiners, the date, mode and conditions of the examination are fixed by the Secretary.

Sec. 20. Attached to each school shall be a manager, * * *

Sec. 22. Lodged in the school are the Director, * * *

Sec. 23. A physician, named by the Secretary, is attached to the school.

Sec. 25. A general inspector, named by the Minister, gives his advice upon the measures concerning the education and administration of the schools. He visits the schools at least once a year, and reports to the Secretary as to their condition.

Sec. 26. The officers and all clerks must give their whole time to their duties. They cannot accept any other political work without the authorization of the Secretary.

Salaries of Officers of the French Veterinary Schools.

Directors.....	9,000 francs a year.
Professors.....	from 5,000 to 7,500 francs a year.
“ of Literature and German Lan- guage.....	3,000 francs a year.
Adjunct professors.....	from 3,000 to 4,000 francs a year.
Demonstrators (<i>Repetiteurs</i>).....	2,400 francs a year.
Physician.....	1,200 francs a year.

SOCIETY MEETINGS.

MEDICAL ASSOCIATION OF THE AMERICAN VETERINARY COLLEGE.

The Medical Association of the American Veterinary College held its regular weekly meetings for the month of January in the lecture-room of the college.

The large number of gentlemen present at the meetings was indicative of the gradually increasing interest taken in the society by its members.

At the meeting held January 5th, Vice-President W. B. Rowland presided.

After the calling of the roll the record of the previous meeting was read and accepted. Mr. Lippincott then read a paper on "Strangles," describing very fully the causes, complications, and various forms of treatment of this disease. A discussion of the subject followed, limited chiefly to the indications for treatment. At the conclusion of the discussion a vote of thanks was extended to the essayist.

Announcement was made that at the next meeting Mr. Agersborg would read a paper on "Parturient Fever."

The next meeting was held January 12th, Dr. C. B. Michener, President, in the chair.

First in the order of business was the reading of the minutes of the previous meeting by the Secretary, which were accepted as read.

The case of J. J. Murray, D.V.S., New York, N. Y., a member of this Association, charged with breach of ethics in advertising, having been referred to the Executive Committee at a previous meeting, the Chairman requested a report. The Secretary of the committee stated that they had communicated with the gentleman, and they would submit as a report his reply to their communication, which they considered very unsatisfactory, extremely uncomplimentary to the Association, and unbecoming one of its members.

On the reading of this communication a motion was made and seconded "that the name of J. J. Murray be erased from the

roll of this Association; that he be *expelled* from its membership, and that he be notified of this action of the meeting by the Secretary." Motion carried by a unanimous vote.

The Chairman of the Committee on Obituary reported no reply from the St. Louis *Globe-Democrat* in regard to charges for insertion of obituary; whereupon the meeting voted "that their silence be construed as affirming that said obituary had been inserted free of expense, and that no further action be taken by the Association."

The meeting then listened to a very interesting paper by Mr. Agersborg. Subject: "The Pathology and Treatment of Parturient Fever." The subject was very ably treated by the essayist, and an interesting discussion followed, participated in by a number of the members, at the conclusion of which a unanimous vote of thanks was extended to the author.

At the next meeting, held January 19th, at the conclusion of the regular order of business, Mr. Moulton read a paper on the subject of "Heredity; the part it plays in the production of disease." The paper was very interesting, the essayist arguing that any disease of the animal organization, whether of structure or function, was liable to transmission from parent to offspring, though the hereditary character of a functional derangement, unaccompanied by any apparent structural change, may be more frequently overlooked, but is nevertheless as well established.

Considerable discussion ensued on the subject, and the thanks of the meeting were extended to the author of the paper.

Announcement was made that a paper would be read at the next meeting by Mr. Weise, and the week following by Mr. Traver.

No other business coming before the meeting, it was adjourned.

I. S. HOWARD, *Secretary*.

CORRESPONDENCE.

EPIZOOTIC CELLULITIS UNQUESTIONABLY A FORM OF INFLUENZA.

Editor Review :

The January issue of the REVIEW furnishes a criticism relative to the nomenclature adopted by myself in designating the type of the outbreak of the late epizootic, from the pen of our worthy correspondent, Dr. Holcombe, Veterinary Inspector U. S. A., who condemns the term epizootic cellulitis, as applied to this variety of influenza, in my brief article of the November number of the REVIEW, which, in order to substantiate my views, necessitates a reply in the way of a few explanatory remarks.

Not being satisfied with the general term influenza, which had been adopted throughout the country by the profession to designate this late epizootic, I endeavored to find a name more explicit than the above; at any rate, a name that would convey an idea as to the localization of the disease by consulting the German and English literature at my command, neither of which furnished the desired information to my entire satisfaction, *i. e.*, a scientific term that alludes to this particular form of influenza, which is still prevalent in the eastern portion of this country.

Most eminent authorities agree that to the term, Influenza, is given too wide a range in veterinary science. Prof. Roll says that it has become a habit with the profession to designate such epizootic invasions as catarrhal fever, bronchial catarrh, acute gastric and intestinal catarrh, pleurisy, pneumonia, and erysipelatous forms of disease, attended with profound apathy by the term "Influenza," a name which does not denote any definite form of disease, but signifies a general distemper.

Considering the various forms in which influenza makes its appearance, it seems to me the term is so vague that it can be correctly applied to almost any acute epizootic disease that in the least has any symptoms of catarrhal affections, not regarding other manifestations that may exist, of much greater importance, even if they decidedly predominate over the catarrhal affections.

If the term "Influenza of solipedes" can be restricted to a

OF INFLUENZA.

diseased condition of any apparatus, it certainly ought to be confined to that apparatus which it, as a rule, involves, and that is the respiratory apparatus.

The principal manifestations of this recent epizootic outbreak are located within the cellular tissue, and for this reason I came to the conclusion to adopt the term epizootic cellulitis, taken from Prof. Williams' "Principles and Practice of Veterinary Medicine," the description of which disease being identical in a great measure with those symptoms exhibited by most of my patients. The various other names for this malady that are mentioned by the same author are rheumatic influenza, muco-enteritis, and pink-eye.

Dr. H. also censures me for heading an article with borrowed nomenclature which means nothing, having reference to the word "Pink-eye." The use of this term, he claims, serves to mislead the public as to the importance of the disease, and gives occasion to the indiscriminate dosing of the afflicted animals to an extent probably never equalled in the country, for it was said to be a new disease, of which veterinary surgeons knew nothing, and consequently everybody felt at liberty to try everything in the shape of medicine that might be recommended, or that might suggest itself to the self-appointed surgeon in attendance.

Conceding that the term "Pink-eye" is a faulty nomenclature to head an article with, in a scientific point of view, I did not intend the reading matter for the professional fraternity alone, nor did I want to inform or enlighten them by my few remarks on the subject, as I granted that all qualified veterinarians were familiar with the disease and its proper management, and from the fact that the public regarded it as a new disease, they naturally would seek information regarding it through veterinary periodicals, and would, unquestionably, look for it under the title of Pink-eye. This reason prompted me to permit my article to be headed with so crude a term in connection with my adopted title, "Epizootic Cellulitis." And by reading the simple facts, as presented in my description, the laity would readily recognize the importance of the new disease (in their minds), and as a rule

would, instead of interfering with it, call upon some competent veterinarian to administer the proper remedial agents, as they would lack confidence within themselves to treat the cases on their own responsibility.

I will state here that at no outbreak of any epizootic disease, since that of 1872, were the services of veterinary surgeons in so great a demand as during this last invasion.

Why? Because the public were not familiar with the disease. They themselves could differentiate it from the previous epizootic, and recognize its importance at once.

But applying the broad term Influenza to it, in my opinion, would tend to lead the public to regard it as the same affliction as the preceding outbreaks that were so designated within the last decennial period, which would be rather dubious in the minds of some, who would then emphatically declare the profession knew nothing concerning the so-called new disease, and would then indiscriminately dose the horses in the same manner as on former occasions, and would shun the employment of a veterinary surgeon until some complication would occur that would baffle them, which might have been avoided if the case had been in competent hands at the outset.

The indifference with which most owners of horses treated the two preceding epizootic influenzas was really hazardous. They, in combination with the grooms, considered themselves skilled in the treatment of the disease. The word "influenza" was quite a common utterance from the mouths of horsemen, and with a remarkable degree of audacity and alacrity did new "horse doctors" spring up from among them, so that a great portion of the veterinary practice found its way into the hands of such empirics, not to mention anything of the numerous quack nostrums that were thrown into the market for the cure of influenza. This ought to be sufficient reason to modify, or specify, the term if opportunity is afforded, especially if the public want to dub it otherwise.

That it is not identical with the former epizootic outbreaks of Influenza can be easily inferred by the almost epizootic manner the disease has invaded the equine population in the various

cities of the country it visited, and the character of the complications that presented themselves, and last, but not least, the different phenomena of the disease itself, which differences were patent to the most ordinary observer; moreover, the crisis of the disease in the last visitation varied greatly as compared with the former ones.

The chief reasons for accepting the term epizootic cellulitis are—(excluding complications) there is no special organ or apparatus, where the disease is invariably localized, it being a general affliction, ushered in usually by a high initial fever, and as a rule having its visible expression within the cellular tissue of the extremities and palpebral region, the former, being at first characterized by a shifting of the posterior extremities, next an erysipelatous swelling and tenderness—in some cases lameness is observed, which is followed by a stiffness, and after the febrile stage has subsided, a marked debility supervenes, and the swelling assumes an oedematous form, the latter by a swelling of the palpebral connective tissues of one or both eyes, a puffiness and eversion of the conjunctiva, with an appreciable serous infiltration submerging it, attended with a partial protrusion of the membrana nictitans, turbidity of the cornea and a marked photophobia in some cases. This is not absolutely pathognomonic; however, it occurs in a vast number of cases and is worthy of mention; moreover, it assists materially in supporting my views as to the localization of the disease.

By recognizing these facts, is it not self evident that the cellulitis is the disease, *per se*, and not only dependent principally, if not entirely, upon the debility of the circulatory system, as Dr. H. claims. I have often observed that the soreness and stiffness existed one or two days before any swelling was perceptible. Now, let us see what the chief complications of the present epizootic are. They, in my experience, do not in the least compare with those of the preceding outbreak of influenza.

Suppurative pneumonia is the main fatal complication. It ordinarily begins as a latent form of interstitial pneumonia, and not with the true catarrhal type, as during the former invasions of influenza. To discover the presence of this organic cellulitis,

(as I prefer to designate it) in its incipency, it requires a careful physical examination, as the calm respiratory movements do not furnish any pronounced information until the disease is thoroughly established.

Acute glanders was the most dangerous complication or sequel of all. I have had occasion to witness seven cases during the presence of the cellulitis, a very unusual occurrence. Several of these cases terminated with suppurative pneumonia, and the others were destroyed. In two of these cases, there were suspicious indications before the epizootic broke out.

But the most lamentable and destructive accident that befel the equine species during the prevalence of this influenza, was the frequency of abortions in pregnant brood mares. This deplorable complication has never in the history of previous visitations of influenza, to my knowledge, played so important a destructive role, as it has during this one. If it had, the scarcity of the equine population would be felt in commercial interests. As for cases of purpura hemorrhagica, which was the great bugbear of former epizootic outbreaks of influenza, I sought for them in vain. These cases must have been exceedingly rare, judging from the 1,500 cases more or less, of this form of influenza, that came under my supervision. I found but one case that bore the slightest resemblance to this unwelcome complication. He was a bay draught horse whose limbs were greatly swollen, clear up to his elbow and stifle joint, with bloody serous oozing through the skin for two days. He had no petechiæ on his visible schneiderian membrane, nor any swelling about his head. I therefore regard it as nothing more than a phlegmonus case of cellulitis. I do however admit, that cases of genuine purpura hemorrhagica, are met with, probably in most instances as a complication of a catarrh or laryngitis not having any connection with the influenza, as I have had quite a number of cases of coryza in non-infected districts, that had recovered, and several weeks afterwards were attacked with the cellulitis in all its phases.

Of course, there were numerous other incidental complications, as intestinal catarrh, laminitis, cerebral afflictions, etc.

Judging from the complications, the absence in a great

measure of the catarrhal afflictions of the air passages, the irregular mode of infection, and the short crisis as a rule, is it not plausible to infer, that the poisonous germs giving rise to the late epizootic influenza, differ materially in their character and effects, as compared with former epizootic outbreaks in this country during the last half score of years? A revision of the nomenclature certainly cannot be so erroneous, after all. Dr. H. acknowledges that it is improper to indiscriminately designate a disease influenza—at the same time he does not venture to suggest a term to discriminate this type of influenza, which I have attempted to do.

J. C. MYERS, JR.

COLLEGE OF VETERINARY SURGEONS OF AMERICA.

Editor of the Review :

Since you have invited criticism of your editorial in the January issue of your journal, under the above caption, be so kind as to excuse the unseemly liberty I take in dissenting so freely, as I propose to do, from your views as there expressed.

No one, I believe, will question the large opportunity you have had for the study of this question from a most advantageous standpoint—namely, that of leading teacher of veterinary medicine in this country, during the last fifteen years. If your experience as a successful teacher, and the founder of a veterinary school has convinced you of the great need for a radical change in the present method of making American veterinarians, I can but concede that your opinions are entitled to the fullest consideration. I believe I have accorded them such treatment, and while I am not unconscious of the grave defects existing in the present institutions which aim to make veterinary surgeons, neither am I convinced that you have discovered the means by which all are to be brought to a general standard of excellence as regards the ultimate result of their teaching.

Your suggestion and recommendation that an association should be formed, which would embrace the principles found in the constitution of the Royal College of Veterinary Surgeons, is

one that, I believe, cannot be realized here, at least at present, on account of the serious obstacles which present themselves at the very outset.

To constitute such an association would require an act of Congress, which the profession is not powerful enough to procure. Furthermore, it is doubtful if an act giving the sole power of granting degrees in veterinary medicine to such an association would be constitutional. The individual States have a law-making power, in which is vested the authority for regulating institutions of learning. It is the inalienable privilege of each State to determine for herself what shall constitute the proper qualifications of her recognized practitioners of a profession. No other power can dictate what shall be done by a State Legislature in regard to their educational matters. It is presumed each State is best acquainted with her own interests, respecting the subject of education, and it is taken for granted that her institutions of learning are provided for the instruction of her own citizens. She can establish her standard of qualifications, but she cannot discriminate against the citizen of another State, or against her own citizens educated in another State or country, providing her standard is reached, and her regulations complied with.

The General Government is evidently in the same position. She may determine what shall constitute the necessary qualifications for her officers or employees, and may even provide institutions in which to give the necessary instruction to obtain that end, but she must at the same time concede to every State the same privileges regarding their own officers, employers and citizens.

If all the schools teaching veterinary medicine should consent to submit their candidates for graduation to a Board of Examiners appointed by a National Veterinary Association, and agree to issue diplomas to only such as were passed by this Board, the end might, perhaps, be effected. But there could be no compulsion in the matter, except each State should put such a provision in the charter of every authorized school. Otherwise, the moment any discontent arose, or any institution saw fit not to submit to the exaction, the whole matter would revert to its present condition.

A National Association of Veterinary Schools, then, is a possible thing, and no doubt could accomplish much, but at present it must be optional with the individual schools whether or not they will enter into association with the others.

Your claim that a variety of veterinary titles would no longer be a vexation to the public, should the new order of things prevail, is scarcely to be acknowledged, since there can be no law preventing the graduates of foreign schools from practising here, and using their several titles. The title to be agreed upon by the association, could in no wise prevent the granting of other veterinary degrees by institutions not members of the association.

Nor do I believe such an association as you have conceived, even if established, would be productive of the results you anticipate, as regards perfecting the methods of instruction, and securing large classes for the schools doing the most thorough teaching. The majority of students of veterinary medicine have entered upon their studies with the purpose of gaining their degrees in the shortest time possible; and that institution which receives general recognition as being a school in good standing, and which, at the same time, makes it public that the enforcement of the provisions of its curriculum is more apparent than real, is the one to receive the most patronage. Not that all the students of such institutions are deficient in their acquirements, but simply that they prefer to study where the "accidents of examination" are least likely to occur.

A. A. HOLCOMBE, D.V.S.

Fort Leavenworth, Kan., Jan. 16, 1882.

OPERATION FOR CARTILAGINOUS QUITTOR.

Mr. Editor:

In answer to Dr. Bryden's letter, which appeared in the January number of the REVIEW, relating to the operation for removing the lateral cartilages in cases of quittor, as reported in the December issue, asking the members of the profession their views, and the results which have been obtained therefrom, especially in

those cases of recent origin : Having performed the operation many times, and seeing it performed with good results by others, it may prove of interest to the profession, as well as to Dr. B., to relate a few cases, which may settle the question as to the advisability of the operation or not, although it must always be taken into consideration whether the case which presents itself shall be operated on, as I do not by any means wish to convey the idea that all cases should be treated in this way, as good results are frequently obtained by other methods, and speedy cures follow. It must be borne in mind that cartilaginous tissue is of low vitality, and its repairing process is therefore slow. It makes no difference whether it is of an acute or chronic type, if the case does not prove readily amenable to ordinary treatment, the operation is certainly indicated. By this means, the diseased parts are placed in the best possible condition for a rapid repairing process.

Case No. 1.—A roan gelding, six years of age, used as a draught horse, had received a contused wound on the outside of the near fore foot and coronet. An extensive sloughing of the deeper tissues had taken place, leaving the cartilage exposed. The wound was treated antiseptically for two weeks, was granulating nicely and to all appearances doing well, with the exception of a fistulous tract, leading to the lower part of the cartilage. It was at once determined to operate: the cartilage was removed and the wound, treated antiseptically and with firm pressure, healed rapidly, and the horse was put to work the sixth week from the time of the operation.

Case No. 2.—A black gelding, nine years of age, also a draught horse, had a quarter crack on the outside of the near fore foot, and two sinuses leading from the coronet to the cartilage, of ten days standing. The quarter and cartilage were both removed, the wound treated as before, and the patient sent to work the sixth or seventh week after, with the wound entirely healed.

Case No 3.—A bay gelding five years of age, a draught horse, had a suppurative corn on the inside of the off fore foot, resulting in cartilaginous quittor. The cartilage was removed and the wound healed, so that the animal was enabled to resume work seven weeks afterwards.

Case No. 4.—Roanish bay gelding, six years old, and a draught horse. Received a severe contused and lacerated wound on the outside of the off hind foot, from the wheel of a truck running over it. Extensive sloughing had taken place, carrying with it part of the cartilage; the wound healed readily, but a sinus formed, invading the cartilage. The remaining portion of the cartilage was removed and the patient sent to work between the seventh and eighth week.

Case No. 5.—A bay mare ten years old, a trotter, had an extensive quitter on the inside of the off hind leg, resulting from a punctured wound of three weeks standing; advised operation. It was performed in the hospital by Dr. Liautard. The wound healed in six weeks, and the mare was given a run in the country for three months, and then was put to fast work.

W. J. COATES, D.V.S.

NOTICE.

AMERICAN VETERINARY COLLEGE.

The position of Demonstrator of Anatomy in the Faculty of this institution is open to competitive examination. The candidate must be a regular graduate of veterinary medicine and in good standing. The candidate must pass a written and oral examination before a board of examiners appointed by the Board of Trustees of the college, and must deliver a lecture upon anatomical preparations, to be selected by the examiners.

The examination will take place on or about the 1st of May, 1882. Applications for examination should be directed to Prof. F. D. Weisse, M.D., Secretary of the Board of Trustees, 51 West Twenty-second street, New York city.

NEWS AND SUNDRIES.

LIVE STOCK AT NEW YORK.—Receipts of live stock at New York, during the year ended Dec. 26, 1881, were: Beeves, 679,423; cows, 5,989; calves, 177,483; sheep, 1,747,445; swine, 1,551,452.

CENSUS OF SHEEP.—The census of 1880 showed that in the United States there were that year 51,183,903 sheep, which is a mere trifle more than one sheep for each of the 50,155,773 population.—*Breeders' Gazette*.

MEDAL FOR M. PASTEUR.—A subscription, headed by several of the scientific societies of Paris, is formed to raise funds for a medal, to be presented to Mr. Pasteur as an appreciation of his scientific investigations and discoveries.

RAPID TRANSIT FOR CATTLE.—Cattle are now shipped from Pittsburgh to Philadelphia in fast trains, in order to comply with the law which forbids the keeping of live stock over 24 hours without unloading to feed.—*The Farmers' Review*.

CINCINNATI FREE FROM PLEURO-PNEUMONIA.—Dr. Farrington, of the United States Pleuro-pneumonia Commission, after inspecting the cattle at all the dairies and distilleries in and around Cincinnati during the past ten days, finds no trace of pleuro-pneumonia among them.—*Ohio Farmer*.

FRENCH PROHIBITION AGAINST PORK.—A bill to regulate the importation of pork has been prepared by the French Government. Pork, properly prepared, will be admitted under certain regulations, but the importation of uncooked chopped meat, such as sausages, remains absolutely prohibited.—*American Cultivator*.

A YOUNG MOTHER.—Mr. A. S. Trumbull, of Smith Centre, Kans., has a heifer that had a calf on the day that she was one year old, which was on the 22d day of May last. Mother and calf did well; and he sold the calf, at three and a half months old, for \$10.—*Breeders' Gazette*.

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FAVORABLE WEATHER FOR LIVE STOCK.—Through all the grazing country of the West the weather has been very favorable to stock interests, and in some parts the stock is actually taking on flesh. Cattle are in good shape for going through the rest of the winter, even if it should be stormy and cold.—*Breeders' Gazette*.

FREAKS OF NATURE.—David Morris, a solid farmer, near Peoria, Kan., has a pig that has six toes on one fore foot and five upon the other. His son has a cow that recently gave birth to a calf that had only three legs and a hump on its back like a camel's.—*Farmers' Review*.

A FATAL DISEASE CONTRACTED FROM A HORSE.—A curious suit for damages has been brought against the Hestonville, Mantua and Fairmount Passenger Railway Company, by Widow Mary Loughrey. Michael Loughrey, who was Mrs. Loughrey's husband, was employed as a driver by the company, early in 1880. The horses attached to his car, it is alleged, were afflicted with glanders. Michael contracted the disease. Dr. D. Hayes Agnew and other eminent physicians were called in, but they could not control the malady. Loughrey suffered intensely for about six weeks, when he died. Mrs. Loughrey claims that the company was legally obliged to employ horses of sound health. She claims \$20,000 damages for her husband's life, sacrificed, as she charges, through the company's neglect.—*Medical and Surgical Reporter*.

PRIZES.—The Danish Society for the Protection of Animals offers two prizes for the best essays on vivisection. The question to be treated is the replacing, for medical experiments, of living animals by those freshly killed.—*Medical and Surgical Reporter*.

SPLENIC FEVER INOCULATIONS.—The inoculations of Pasteur for splenic fever, are reported, up to October 1st, on 160 flocks, containing 68,900 sheep. Before vaccination was practiced, the mortality from the fever was about one in twenty-three. During vaccination, and before its effects were fully obtained, about one in 130 died. After the operation had produced its full effects,

there died only about one in 7,000 of those vaccinated.—*Proceedings of the Medical Society of the County of Kings.*

A REMARKABLE EGG.—The *Farm Journal* of January, 1882, tells of a person in Bethlehem Centre, who on breaking an egg, found within it another perfect egg. The outside egg that contained the inner one was of the ordinary size, and from outward appearance a perfect specimen. In opening it, it was found to contain the white, a perfect yolk, and an egg about the size of a large walnut, with a shell of a fair form floating in the liquid.

VALUABLE CONTRIBUTION.—Hon. Thomas Sturgis, of Wyoming Territory, has given the public a very valuable contribution on "Cattle Diseases, Their Cause and Cure," in the columns of the *Cheyenne Weekly Leader*. It is gratifying to the veterinarian to see these subjects discussed by those outside of the profession. Mr. Sturgis writes in a manner that convinces one at once that he is thoroughly conversant with his subject and alive to its importance. He shows to the stock-raisers of the West, their dangers from enzootic diseases, by detailing the history of the invasion of these maladies in other countries. It is to be hoped that every owner of live stock—East and West—will see the necessity of the proposed protective legislation, and that they will receive through the Government and at the hands of qualified veterinarians an immunity against those losses that have time and again devastated the herds of foreign countries.

VENOM OF SERPENTS.—M. Gautier has established by numerous experiments the fact that the venom of serpents bears a certain chemical resemblance to the substances found in certain animal excretions, known as "extractive matters." The venom can be boiled with water, filtered and evaporated in the bain-marie, after acidulation, and then filtered again, without losing its activity. It can even be heated to 120° or 125° C. (257° F.) without its effects being modified. M. Gautier has diluted the venom with water, and then mixed it with certain substances, in order to ascertain if such substances would destroy its efficiency. These mixtures he has injected into animals, and has found that many substances, hitherto considered antidotes, have no such powers

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whatever. Tannin somewhat modified the action of the poison, but did not annul it; neither did the nitrate of silver, though it somewhat retarded its action; perchloride of iron and various essences had no effect whatever; ammonia, which has always been prescribed as an antidote, had no effect. An interesting result of these experiments is the discovery that the venom of serpents does not appear to differ chemically from human saliva, but only differs in the intensity of its effects.—*Translated by Wm. Deming, of Litchfield, Conn., from the Journal de Medecine et de Chirurgie Practiques.*

EXCHANGES, ETC., RECEIVED.

FOREIGN.—Veterinarian, Veterinary Journal, Clinica Veterinaria, Revue für Thierheilkunde und Thierzucht, Archives Veterinaires, Revue de Hygiene, Recueil de Medecine Veterinaire, Gazette Medicale, Presse Veterinaire, Annales de Belgique, Journal de Zootechnie.

HOME.—Country Gentleman, Medical Record, Medical and Surgical Reporter, Turf, Field and Farm, American Agriculturist, Ohio Farmer, Prairie Farmer, National Live Stock Journal, Breeders' Gazette, Bulletin of the National Board of Health.

JOURNALS.—Home Farmer, Minnesota Farmer, Iowa Farmer, Journal of Agriculture, Texas Live Stock Journal, American Cultivator, Cheyenne Weekly Leader, Massachusetts Ploughman.

PAMPHLETS AND BOOKS.—Dangers de la Trichinose (by M. Zundel), La distomatose du mouton (by the same), La depecoration (by the same), Proceedings of the British National Veterinary Congress.

CORRESPONDENCE.—W. Bryden, A. A. Holcombe, L. L., H. F. Toste, J. C. Myers, Jr., W. J. Coates, R. Harrison, G. C. Fyville, R. B. Corcoran, (First Cavalry, U. S. A.), T. E. Rice, S. Wittshire, (of Natal, South Africa).